We, the members of the Ornamental Crops Varietal Release Committee of the Nebraska Agricultural Experiment Station, hereby approve the naming of Pitcher Sage (PM-K-1408) with the varietal or cultivar name of NEKAN and recommend that breeder seed of this selection be maintained by the Nebraska Agricultural Experiment Station and the foundation seed be maintained and distributed by the U.S. Soil Conservation Service Plant Materials Center, Manhattan, Kansas. Foundation seed will be available for distribution in November, 1976

Sotero S. Salac — May 23, 1975
Sotero S. Salac, Committee Chairman — (date)
Department of Horticulture

R. D. Uhlinger — (date)
R. D. Uhlinger, Committee Member
North Platte Experiment Station

M. Boosalis — May 29, 1975
M. G. Boosalis, Committee Member — (date)
Chairman, Department of Plant Pathology

K. P. Pruess — 5/23/75
K. P. Pruess, Committee Member — (date)
Department of Entomology

D. P. Coyne (by M. L. Schuster) — June 2, 1975
Chairman, Department of Horticulture — (date)
Ex Officio

Sponsoring Agencies:

Robert E. Williams — JUN 17 197
Director, Plant Sciences Division — (date)
U.S. Soil Conservation Service

Richard W. Smith — JUN 30 1975
Director, Kansas Agricultural — (date)
Experiment Station

Thomas D. Doyle — July 17, 1975
State Engineer — (date)

The production and distribution *of* foundation seed of Pitcher Sage (PM-K-1408) and its naming and release with varietal or cultivar name of NEKAN is hereby approved:

H. O. Ottoson, Director
Nebraska Agricultural Experiment Station
Institute of Agriculture and Natural Rescources
University of Nebraska

7-21-75
(date)

Request For The Release Of Pitcher Sage Cultivar 'Nekan' (PM-K-1408)

S. S. Salac, P. N. Jensen, and R. D. Lippert

Department of Horticulture
Institute of Agriculture and Natural Resources
University of Nebraska-Lincoln
and
United States Department of Agriculture
Soil Conservation Service

May, 1975

I. Suggested Name: Pitcher Sage 'Nekan'

II. Species Description: Pitcher sage, Salvia azurea Lam. var. grandiflora Benth., is a herbaceous perennial with simple or branched stems 115 to 165 cm. tall strigose, square; leaves 3-12 cm. long, linear or linear-lanceolate, short petioled, toothed or entire, strigillose, ashen-gray; inflorescence terminal bracteate spike-like racemes, the internode usually well developed, the upper short and often concealed by the flowers; calyx at anthesis 6-8 mm. long, canescent, upper lip entire, 5-7 nerved about 1/4 as long as tube; bilabiate corolla 15-30 mm. long, blue or whitish, tube distinctly exserted from calyx and upper lip bearded on back; nutlets smooth, ovoid, and brownish-gray.

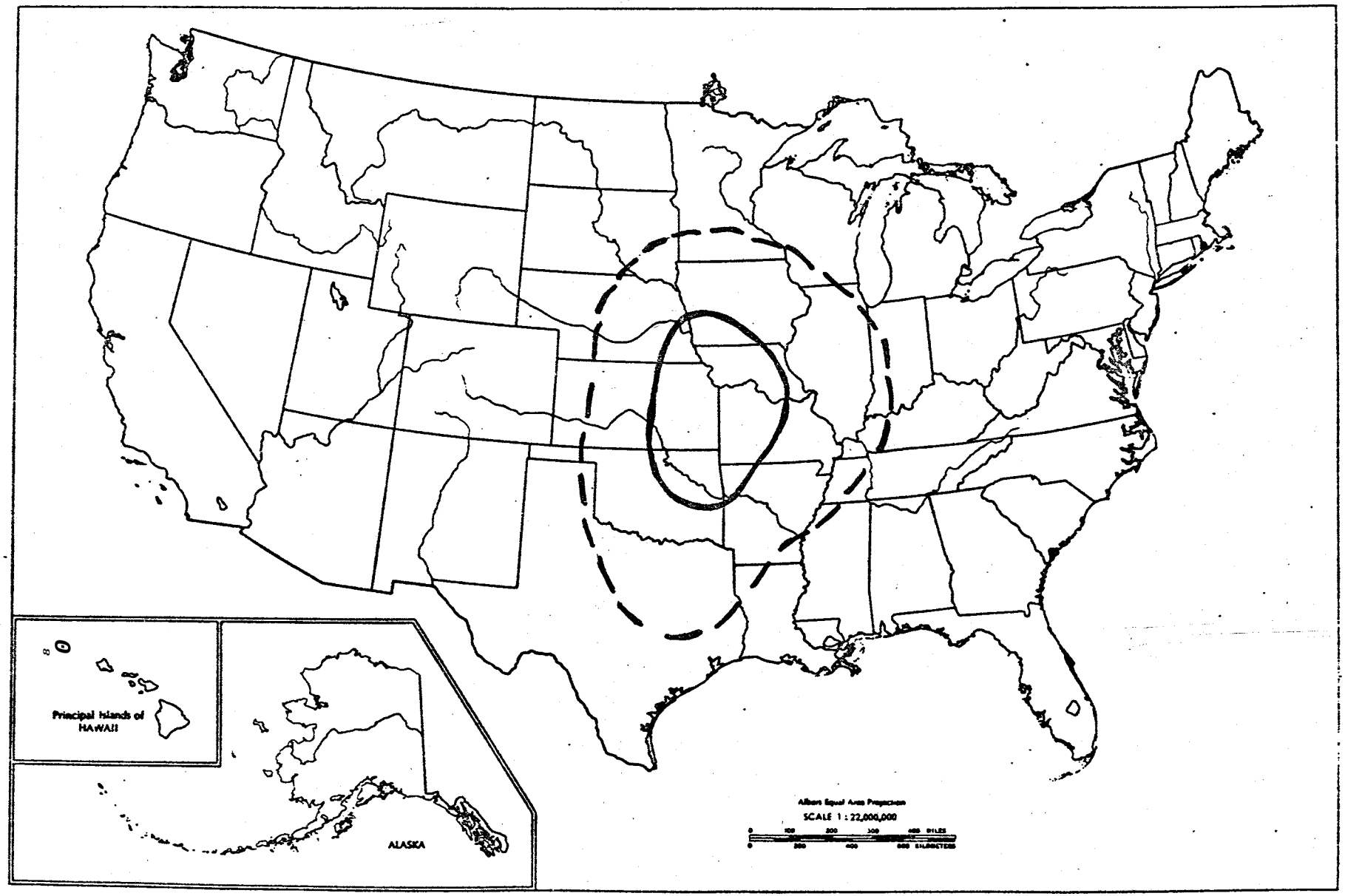
III. Natural Distribution, Adaptation Range and Associated Plant Community:

A. Natural Distribution of Species - Prairies from Nebraska to Minnesota, south to Kentucky, Arkansas and Texas (Figure 1).

B. Adaptation Range of Cultivar - Nebraska, Iowa, Kansas, Missouri, and Oklahoma (Figure 1).

C. Associated Plant Community - Pitcher sage is generally associated with plant communities in the true prairie. It is found growing on the deep lands that vary in soil texture from silt loams to silt;, clay loams. The plant: is found growing with mid- and tall-growing grasses, including big bluestem, little bluestem, indiangrsss, switchgrass, sideoats grama, and prairie dropseed.

Figure 1. Map showing natural distribution of pitcher sage (area enclosed by broken lines) and application of cv. 'Nekan' (area enclosed by solid line).



IV. Procedures Used in Developing the Cultivar: PM-K-1408 (Nekan) is one of several seed collections made in Nebraska, Kansas, and South Dakota from 1969 to 1971 (Table 1). PM-K-1408 (Marion Co., Kansas), PM-K-1330 (Pall River Co., South Dakota), PM-K-1582 (Hayes Co., Nebraska), PM-K-1415 (Hitchcock Co,, Nebraska), and PM-K-1583 (Saunders Co., Nebraska) were planted in May 1971 in single rows (20 ft. long at Manhattan and 50 feet at the University of Nebraska Field Laboratory) for initial evaluation.

PM-K-1408 was selected for further evaluation in 1972 because of its better overall performance over the other accessions. Seed increase plots consisting of 2-100 ft. rows were established to serve as source of seeds for future needs.

V. Field Performance of Pitcher Sage 'Nekan': Summary of the overall performance of several accessions of pitcher sage is presented in Table 1. Plants of PM-K-1408 were consistently rated excellent in vigor and stand. Those of the other accessions showed some undesirable variations in their yearly ratings. Growth of the plants of PM-K-1408 was also fairly uniform because there was less variation in the height and spread measurements.

The blooming period data did not show any significant trend which might favor any of the accessions. Size of the inflorescence and color of the flowers were also generally about the same for all 5 accessions.

VI. Seed Production and Other Related Data of Pitcher Sage 'Nekan':

All data presented in Table 2 were determined from seed samples harvested and cleaned by hand. Yield of seed per acre under conditions of minimum irrigation and no fertilization ranged from 170 to 300 lbs./acre. Germination of seeds ranged from 89.3 to 94.6%. The seeds germinated readily under greenhouse conditions (26 ± 3 C). The rates of germination reported were obtained 10 to 14 days after seeds were planted in seed flats containing a growing medium of jiffy mix.

The number of seeds/lb. ranged from 131,146 to 132,857.

Table 1. Performance of pitcher sage 'Nekan' and other selections over a period of three years.

ACCESSION NUMBERS	ORIGIN OF SOURCE	YEAR	PERFORMANCE RATING 1/ Vigor	Stand	GROWTH (cm.) Height	Spread	BLOOMING PERIOD Start	Full	End
PM-K-1330	Pall River Co. South Dakota	1972	3	3	85-155	12-18	6-15	8-4	9-10
		1973	5	5	88-104.	15	7-9	C-6	9-28
		1974	3	1	98-116	15-24	6-28	7-26	9-25
PM-K-1582	Hayes Co. Nebraska	1972	3	5	107-122	6	8-9	9-5	10-19
		1973	1	3	118-174	99-15	7-12	3-27	3-29
		1374	1	3	104-159	19-15	7-8	8-28	10-10
PM-K-1415	Hitchcock Co. Nebraska	1972	1	1	125-204	15	7-20	8-28	10-7
		1973	I	3	104-140	9	5-24	9-5	4-24
		1374	1	5	91-152	15	7-2	8-26	10-20
PM-K-1583	Saunders Co. Nebraska	1972	1	3	104-137	6	8-9	8-28	10-10
		1373	1	5	137-178	12	7-5	8-14	9-24
		1974	1	3	98-137	12	7-2	8-15	9-35
PM-K-1408 'Nekan'	Marion Co. Kansas	1972	1	1	116-143	10	8-18	9-5	10-19
		1973	1	1	153-189	12	8-2	8-27	9-28
		1974	1	1	124-159	12	7-12	9-3	10-8

1/ Performance ratings for stand and vigor where 1 is excellent, 5 is medium, and 10 is failure or very poor.

Table 2. Data on seed production, germination, number of seed per pound, and purity of pitcher sage 'Nekan'.

Year	Yield/Acre lb.	Germination %	Purity %	Number/lb.
1972	250	89.3	98.6	131,146
1973	170	92.5	99.7	132,351
1974	300	94.6	93.2	132,851

VII. Seed Increase and Distribution:

Foundation seed of pitcher sage 'Nekan' will be produced and distributed by the U. S. Soil Conservation Service Plant Materials Center at Manhattan, Kansas. Breeder seed stocks will be maintained by the Department of Horticulture at the University of Nebraska Field Laboratory at Mead, Nebraska.